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FIRE PLANNING FOR AIR ASSAULT OPERATIONS

A thesis presented to the Faculty of the U.S. Army  
Command and General Staff College in partial  
fulfillment of the requirements for the  
degree

MASTER OF MILITARY ART AND SCIENCE



by

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Fort Leavenworth, Kansas  
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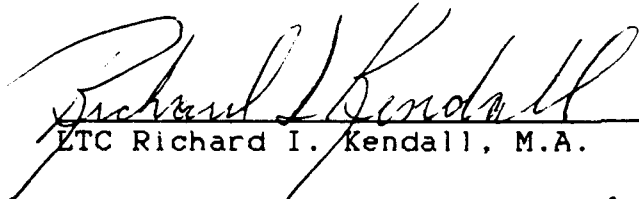
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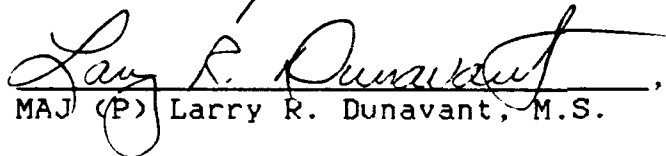
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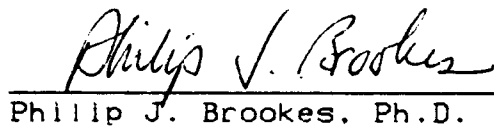
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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other government agency. (References to this study should include the foregoing statement.)

## ABSTRACT

FIRE PLANNING FOR AIR ASSAULT OPERATIONS: by Major Loyd Frank Lawing, Jr., USA, 73 pages.

This is an in-depth analysis of the doctrine, tactics, techniques, and procedures used by forces of the United States Army to plan fires for air assault operations. The information gathered to complete this thesis was drawn from a variety of sources to include a model (the TRADOC Common Teaching Scenario) and the best information available from Operation Desert Storm.

The conclusions drawn from this study include: A doctrine for fire support does exist, but it is difficult to find and use because it is not found in one place. There is a great difference in opinion of the best way to control the fires of an air assault operation, ie. procedural control vs. positive control. There are great discrepancies in how to conduct fire support for air assault operations, so it is very difficult for the artillery to establish tactics, techniques, and procedures to support air assault operations. There is no standard procedure currently being used, or espoused, by the U.S. Army for fire support in air assault operations.

The principal conclusion of this study is that there is a need to adopt standard procedures for fire support for air assault operations. This standard must be incorporated into existing manuals, so a standard procedure for fire support for air assault operations will be used throughout the U.S. Army.

## ACKNOWLEDGEMENTS

The writing of this thesis has been a unique learning experience that was made possible only by the help, understanding, and guidance of many individuals. I must express my gratitude to just a few of those people who assisted me in the completion of this thesis.

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Third, I need to thank all my other fellow students who also provided their help in their own special ways. Thanks CAC!

Next, I need to thank COL Daugherty and my fellow MMAS candidates from my A021 MMAS Class. Once a week, this class provided some insight and frank discussion I was unable to get anywhere else. It was a professionally rewarding and enjoyable class. Thanks a million guys!

Finally, I want to thank all my fellow MMAS candidates who took the time to strive for something bigger and better than a Leavenworth "B". Good luck and God bless you.

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## GLOSSARY OF ACRONYMS AND ABBREVIATIONS

AATF	Air Assault Task Force
ALB	AirLand Battle
BUCS	Backup Computer System
CAS	Close Air Support
Class V	Ammunition
CS	Combat Support
CSS	Combat Service Support
CTAD	Corps Target Acquisition Detachment
EAC	Echelons Above Corps
FDO	Fire Direction Officer
FLOT	Front Line of Troops
FM	Field Manual
FSCCOPD	Fire Support Coordinator
FSE	Fire Support Element
FSO	Fire Support Officer
ICM	Improved Conventional Munitions
JRTC	Joint Readiness Training Center
PZ	Pickup Zone
Lt	Light
LZ	Landing Zone
MET	Meteorological
METT-T	Mission, Enemy, Troops, Terrain, and Time
MMAS	Master of Military Art and Science

NTC	National Training Center
OPLAN	Operations Plan
SEAD	Suppression of Enemy Air Defense
SOI	Signal Operating Instructions
SOP	Standard Operating Procedures
TRADOC	Training and Doctrine Command
USASMA	United States Army Schools and Military Academy
VT	Variable Time
WLR	Weapons-Locating Radar
WP	White Phosphorus

## CHAPTER ONE

### DEFINITION OF THE PROBLEM

#### INTRODUCTION

For the maneuver forces of the American army to be successful, the maneuver forces must have timely and accurate fire support. The artillery community has been striving for years to provide the types of fire support the maneuver forces require. Standardization will help achieve that end.

The threat in Europe and a "heavy" mentality have allowed this issue to be overlooked by the artillery community, the Artillery School, and the Army. With the tensions in Europe subsiding and Low Intensity Conflicts taking on more and more significance, the importance of this study becomes obvious. This thesis will examine current U.S. Army doctrine, tactics, techniques, and procedures to determine their validity and standardization within the parameters discussed in this paper.

## PROBLEM STATEMENT

Is there a valid, standard procedure for fire planning to support air assault operations?

## QUESTIONS THAT MUST BE ANSWERED

1. What is the current doctrine for fire planning in support of air assault operations?

2. What current fire planning methods are being used in the field to support air assault operations?

3. Are the current fire planning methods being used in the field standardized?

4. Should there be a standard procedure adopted for fire planning in support of air assault operations?

## BACKGROUND

FM 100-5, Operations, establishes current Airland Battle Doctrine for the US Army. It expresses the doctrinal

manner in which the Army will fight on the modern battlefield and serves as the basis for operations and concepts, force design, training and education, and the development of subordinate doctrine. <sup>1</sup> The modern battlefield will be chaotic, intense, and deadly beyond anything seen before. Battles, in all probability, will be non-linear and require American soldiers to do their jobs in isolated environments without the benefit of a higher headquarters support. American forces must fight using every resource available and get the maximum return on those limited but extremely valuable assets.

In pursuit of this end, the Field Artillery is reviewing all fire support operations. As a result of the varied and different units in the Army, standardization is one of the best ways to ensure all "players" are doing their jobs the same way every time. Standardization makes the job easier. Everyone knows what to do and what the other fire supporters are doing as well. In a profession as varied and complex as the military, standardization is a must.

Two MMAS theses from 1989-90 both concluded that air assault operations needed to be standardized. Recent articles in professional journals, and after action reports from recent military exercises, have also stated a need for additional standardization in the fire planning for light units. The Field Artillery School fully agrees with this assessment and has stated that a manual needs to be

published as soon as possible on this subject. The Field Artillery School requested this writer to complete such a study towards those ends.

#### ASSUMPTIONS

1. A doctrinal standard is needed for fire planning for air assault operations.

2. No standard exists for fire planning for air assault operations.

3. The Army, (in reality Field Artillery School), will accept this as a valid review of fire planning for air assault operations.

4. The tenets of AirLand Battle, as prescribed in FM 100-5, Operations, are valid and provide the framework for conducting air assault operations.

5. On reviewing this thesis, the Army should adopt the conclusions and recommendations found here.

## DEFINITION OF TERMS

### 1) Air Assault.

Operations in which air assault forces [combat, combat support (CS), and combat service support (CSS)], using the firepower, mobility, and total integration of helicopter assets in their ground or air roles, maneuver on the battlefield under the control of the ground or air maneuver commander to engage and destroy enemy forces. 2

### 2) Fire Support.

Assistance to those elements of the ground forces which close with the enemy such as infantry and armor units, rendered by delivering artillery and mortar fire, naval gun fire, and close air support (CAS). Fire support may also be provided by tanks, air defense artillery, and Army aviation. 3

### 3) H-Hour.

The specific hour on D-day at which a particular operation commences is known as H-hour. It may be commencement of hostilities; the hour at which an operation plan (OPLAN) is executed or is to be executed; or the hour that the operation phase is implemented. 4

### 4) H-Hour Sequence.

The order which a schedule of events is executed. It is designated to synchronize all assets within an operation to be executed in conjunction with H-hour. 5

### 5) Procedural Control.

Fires are initiated and terminated according to a strict time schedule. 6

### 6) Positive Control.

Fires are executed with phase lines, air control points, and/or other control measures to initiate, shift, and terminate fires. 7



## LIMITATIONS

1. This study will focus primarily on light units and their conduct of air assault operations.

2. This study will focus primarily on fire support for air assault operations but not that of supporting aviation units.

## DELIMITATIONS

1. This study will not address the special operational requirements of units stationed around the world and their special requirements for air assault operations.

2. This study will not address air assault operations for the sister services.

3. This study will not address specific contingency operations that may involve air assault operations.

4. This study will use the TRADOC Common Teaching Scenario (Heavy) (Coordinating Draft) to establish a

standard tactical scenario with which to examine air assault operations.

### SIGNIFICANCE OF STUDY

For any armed force to be successful, they must receive timely and accurate fire support. This is especially true for light forces due to the very nature of their organizations.

While light forces are in the process of conducting air assault operations, these forces are extremely vulnerable. A standard for fire planning will allow all the fire support agencies involved in these operations to aid the light forces in completing their missions. This standard would allow all the players to execute their support missions based on the same doctrinal policies.

### METHODS AND PROCEDURES

The best method of researching this thesis will be to compare and contrast the information available on this subject. Most of the information for this thesis will come

from military publications and articles related to this subject. Also incorporated will be lessons learned from current military studies where they apply. A thorough examination of this subject using this method should allow a proper review of the information available and should produce an answer to the thesis questions presented here.

## ENDNOTES CHAPTER ONE

<sup>1</sup> U.S. Department of the Army, FM 100-5, Operations. 5 May 1985, i.

<sup>2</sup> U.S. Department of the Army, FM 101-5-1, Operational Terms and Graphics. 21 October 1985, 1-1.

<sup>3</sup> Ibid., 1-36--1-37.

<sup>4</sup> John G. Crary, "Fire Support Techniques in Support of Cross FLOT Air Assault and Airmobile Operations: Are We Doing It Right?" (MMAS dissertation, U.S. Army Command and General Staff College, 1990), 11.

<sup>5</sup> Ibid., 11.

<sup>6</sup> U.S. Department of the Army, FM 6-20-50, Fire Support for Brigade Operations (Light). 5 January, 1990, 11.

<sup>7</sup> Ibid.

## CHAPTER TWO

### REVIEW OF LITERATURE

#### INTRODUCTION

In order to determine if a standard or doctrine exists concerning the tactics, techniques, and procedures for planning, controlling, and executing fire support for air assault operations one must study and review the existing doctrinal literature available on this subject. A study of this literature has shown that a doctrine probably does exist, but not completely in any one place. "Pieces" of this doctrine are found in many places and mixed with many other procedures. Since this doctrine does not exist entirely in one place, it has not been as available as it should have been to the soldiers who need it.

This study will present the review of literature in seven parts consisting of:

- a. U.S. Army Field Manuals.
- b. Training and Field Circulars.
- c. Books.
- d. MMAS Theses.
- e. Unit SOPs.
- f. Articles.
- g. Other Sources.

#### U.S. ARMY FIELD MANUALS

U.S. Army Field Manuals have obviously been the best source of doctrinal material. They are the one best source of U.S. doctrine. They also contain the tactics, techniques, and procedures that support that doctrine.

FM 6-20, Fire Support in the AirLand Battle was the obvious starting place.

This publication is the Army's capstone manual for fire support. It embodies the doctrinal tenets for the employment of fire support in the AirLand Battle. It establishes a basis for understanding fire support as an essential element of combat power.<sup>1</sup>

FM 6-20 provides an overview of fire support and sets the ground rules for fire support planning, organization, and training.

FM 6-20-50. Fire Support for Brigade Operations

(Light) was essential to any research on this topic.

The purpose of this publication is to provide light forces fire support officers and enlisted personnel at maneuver company, battalion, and brigade with a how-to manual. It focuses on fire support officers (FSOs) in light infantry, airborne infantry, air assault infantry, and infantry at brigade and below. 2

FM 6-20-50 is a hands-on manual that tells fire support personnel the best way to do their jobs. It provides details on how to do certain fire support tasks at different levels and how these levels interact with one another. It also provides examples of offensive and defensive planning and planning for special operations such as air assault operations.

FM 6-20-1. Tactics, Techniques, and Procedures for The Field Artillery Cannon Battalion Final Draft (Unedited) provided some much needed detail to this thesis.

This publication sets forth doctrine pertaining to organization, command and control, and operations, and tactics, techniques and procedures for the battalion. It establishes the responsibilities and general duties of key personnel by focussing on how the field artillery fights, and it keys the battalion commander to those areas that must be trained in order to win. 3

This manual became one of the best references for this thesis. FM 6-20-1 discusses many of the details required by the field artillery battalion concerning support for maneuver battalions, operations, delivery of fires, target acquisition, communications, combat service support, special environments (including air assault operations), and fire planning procedures. It provided many of the specifics that will be discussed throughout this thesis concerning fire support for air assault operations.

FM 90-4, Air Assault Operations was the best source of information concerning army air assault operations.

This manual describes how infantry and aviation units plan and conduct air assault operations. It emphasizes the coordination necessary between these organizations concerning the planning sequence and tactical employment of both elements. It is written primarily for aviation and infantry units and is applicable to combat support and service support units with a need to plan for and use Army aviation support. <sup>4</sup>

Its detailed discussion of planning and conducting air assault operations was critical to my understanding of these operations. The section on fire support planning was very helpful in the initial research on this subject.

FM 100-5, Operations is the Army's capstone manual. Any discussion of Army doctrine must be based on this manual and its discussion of airland battle doctrine.



## TRAINING AND FIELD CIRCULARS

TC 6-71, Fire Support For the Maneuver Commander was the only Training and Field Circular that was used in the research for this thesis. It had nothing specific for air assault operations, but was an excellent reference for an insight into the maneuver commander's understanding and use of fire support.

## BOOKS

Six books were reviewed during the research of this thesis. Many were very interesting and provided a great deal of historical information about air assault operations. This thesis however did not require historical information so this historical information was not incorporated into the thesis.

## MMAS THESES

Two theses written in 1990 for the MMAS program were the impetus for this thesis. Major John G. Crary's, "Fire

Support Techniques in Support of Cross FLOT Air Assault and Airmobile Operations: Are We Doing It Right?" and Major Richard P. Formica's, "Fire Support for the Aviation Brigade (Heavy Division): A Doctrinal Analysis" were both excellent sources of information for this thesis. Each felt that a detailed review of the doctrine for fire support for air assault operations was critical and needed to be done as soon as possible. Hopefully this thesis will answer some of the questions that were raised by these two fine theses.

#### UNIT SOPS

Unit SOPs were excellent sources of information on how units actually conducted air assault operations. The following units provided their SOPs for review: 6th Infantry Division (Light) Artillery, Fort Richardson, Alaska; the 7th Infantry Division (Light) Artillery, Fort Ord, California; the 10th Aviation Brigade, 3-25 Assault Helicopter Battalion, Fort Drum, New York; the 25th Infantry Division (Light), Schofield Barracks, Hawaii; the 82d Airborne Division Artillery, Fort Bragg, North Carolina; and the 101st Airborne Division (Air Assault), Fort Campbell, Kentucky.

Major Crary's MMAS reviewed these in great detail, and this thesis will draw on some of his analysis for information on these SOPs.

## ARTICLES

The multitude of articles reviewed for this thesis provided some outstanding information that might add to the readers professional development. There were, however, no articles specifically addressing the topic of this thesis. Some of the articles addressed fire support for light operations or new ways to conduct fire support operations, but again there was no information on air assault operations that could be incorporated into this thesis.

## OTHER SOURCES

There were also other sources reviewed in an attempt to find information on this subject. (These other sources are listed in the bibliography found at the end of this thesis.) None of these other sources contained information on the doctrine or the tactics, techniques, and procedures for planning, controlling, and executing fire support for air assault operations.

## ENDNOTES CHAPTER TWO

<sup>1</sup> U.S. Department of the Army, FM 6-20, Fire Support in the AirLand Battle. 17 May 1988, v.

<sup>2</sup> U.S. Department of the Army, FM 6-20-50, Fire Support for Brigade Operations (Light). 5 January, 1990, ix.

<sup>3</sup> U.S. Department of the Army, FM 6-20-1, Tactics, Techniques, and Procedures for The Field Artillery Cannon Battalion. Final Draft (Unedited). 23 February 1990, i.

<sup>4</sup> U.S. Department of the Army, FM 90-4, Air Assault Operations. 16 March, 1987, iii.

## CHAPTER THREE

### METHODS AND PROCEDURES

#### INTRODUCTION

The methods and procedures used in the research of this thesis were very simple. Questionnaires, surveys, or the other various forms of gathering information for a thesis did not lend themselves to the research.

Most of the information used in this paper came from the various military publications related to this subject. Also, incorporated into the research for this thesis will be lessons learned from current military training, such as The National Training Center (NTC), The Joint Readiness Training Center (JRTC) and information from Operation Desert Storm. A model, or simulation, will also be studied to try to determine if the current air assault doctrine, tactics, techniques, and procedures would be successful.

These three varied sources supplied much of the useful information on the subject of air assault operations.

All three will be discussed in detail to provide the reader the information relevant to this thesis.

## OBJECTIVES

The objective of this thesis is to determine if there is a valid, standard procedure for fire planning to support air assault operations. To that end, military publications yielded a wealth of information about all aspects of air assault operations. Comparing, and contrasting, this information supplied the best methods available to execute air assault operations. Again, however, this information was not found in a single publication which caused a great deal of early confusion. The information is there, but difficult to find.

A simulation, or model, provided the best way to validate the information obtained from this research. Using the TRADOC Common Teaching Scenario, this author could examine an air assault operation in great detail. This scenario provided a combat operation to study in a peacetime environment.

The TRADOC Common Teaching Scenario,

provides the information and background required for development of the brigade offensive OPORD for 2d Bde, 21st Inf Div (Lt), attached to the 25th Armored Division. <sup>1</sup>

With all this information, a brigade sized air assault operation can be planned and evaluated. This information will be invaluable in the efforts of this author to compare and contrast current doctrine with a "school approved" air assault operation.

The TRADOC Common Teaching Scenario provides a great deal of information to be studied and reviewed. There is detailed combat service support (CSS) information that anyone studying the logistics capabilities of such a venture would find very intriguing.

Of great interest to this researcher, was the information found in the First Section, "Brigade Developmental Data". In this section there was a wealth of information on the five plans of an air assault operation:

- \* the ground tactical plan
- \* the landing plan
- \* the air movement plan
- \* the loading plan
- \* the staging plan <sup>2</sup>



These five plans will be discussed in some detail in Chapter Four of this thesis.

Of great interest to this author was how this unusual idea was developed and became an Army standard teaching aid. The TRADOC Common Teaching Scenario was,

designed to provide all TRADOC schools, centers, and the USASMA with a common AirLand Battle (ALB) doctrinal base for tactical instruction whenever operations in Europe are depicted. <sup>3</sup>

The six chapters provide a "scenario... [that] is centered on a notional US, forward-deployed-corps the 10th (US) Corps." <sup>4</sup> This provides a wide spectrum of operations, plans, and scenarios to be studied and completed.

The Heavy-Light mix scenario provided in Chapter 6 is the one that allows the light brigade to do an air assault operation. It is not only a very timely topic but a very good one. It provides not only a believable scenario, but one that will allow the students and faculty alike to train and operate with real-world doctrinally correct scenario.

## SUMMARY

The information available in these sources more than adequately covers the topic of this thesis. There are

however, some very discouraging limits. These limits will be discussed in more detail in the following chapters.

The TRADOC Common Teaching Scenario was one of the best tools available to this author. It allowed the author to work through all the planning phases and execution phases of an air assault operation.

The TRADOC Common Teaching Scenario also allowed the author to evaluate the question that this thesis is based upon. Specifically, is there a valid, standard procedure for fire planning to support air assault operations? This question will also be discussed in detail in the following chapters.

### ENDNOTES CHAPTER THREE

1 TRADOC Common Teaching Scenario (Heavy)  
(Coordinating Draft). June 1990, 6-1.

2 Ibid., 6-9--6-10.

3 Ibid., i.

4 Ibid.

## CHAPTER FOUR

### FIRE SUPPORT DOCTRINE FOR AIR ASSAULT OPERATIONS

#### INTRODUCTION

There are numerous ways to get soldiers into battle. Air assault operations provide the commander with unique opportunities and a greater flexibility in the employment of light troops. The capability of inserting troops and equipment almost anywhere on the battlefield, offers many advantages to the commander and his staff. "They can extend the battlefield, move, and rapidly concentrate combat power like no other available forces." <sup>1</sup> By placing these troops on an open flank, behind enemy positions, or anywhere the enemy would least expect them, the commander can gain an unexpected advantage over the enemy. Air assault operations will play a very important role in any future US military operations.

## AIR ASSAULT OPERATIONS

There are many people who may think that air assault operations have no place on the modern battlefield. Current U.S. Army doctrine states that "AirLand Battle doctrine requires worldwide strategic mobility and warfighting capabilities across the spectrum of conflict." <sup>2</sup> Air assault operations clearly fit within the perimeters outlined in U.S. Army doctrine. Specifically,

Air assault operations are high risk, high payoff operations, that, when properly planned and vigorously executed, allow commanders to apply the four basic tenets and 10 combat imperatives of the AirLand Battle Doctrine (FM 100-5). <sup>3</sup>

Air assault operations can be conducted in either low-, mid-, or high-intensity environments. These soldiers and their units have been trained to operate almost anywhere. They are highly trained, specialized units.

Army aviation and infantry units can be fully integrated with other members of the combined arms team to form powerful and flexible air assault task forces that can project combat power throughout the entire depth, width, and breadth of the modern battlefield with little regard for terrain barriers. The unique versatility and strength of an air assault task force is achieved by combining the capabilities of modern rotary-wing aircraft -- speed, agility, and firepower -- with those of the infantry and other combat arms to form tactically tailored air assault task forces

that can be employed in low-, mid-, and high-intensity environments. 4

The recent successes of the 101st Airborne (Air Assault) Division in Operation Desert Storm, have proven that air assault troops can execute AirLand Battle Doctrine on the modern battlefield. The 101st Airborne successfully completed "the largest helicopter air assault in history, ...fifty miles behind Iraqi lines, ...severing the main link between Baghdad and the Republican Guards in Basra." 5 This operation provides not only an excellent example of the flexibility and multiple options these air assault units can provide, but proof that, if these forces are properly employed, they can and will be successful.

To conduct air assault operations, units must be properly organized and equipped. For example,

(a)ir assault operations are accomplished by employing an air assault task force (AATF). The AATF is a group of integrated forces tailored to the specific mission and under the command of a single headquarters. It may include some or all elements of the combined arms team. 6

These AATFs are organized at brigade and battalion level and assigned a specific mission to accomplish based on their particular organization.

FM 90-4, Air Assault Operations provides many of the details required to plan, organize, and execute air assault

operations. Critical to these operations is the detailed planning that is required to make them successful.

Air assault operations must begin with an "effective task organization, precise planning, decentralize(d) control, and establishing air assault radio nets." 7

The most important of these planning factors is precise planning.

Air assault operations must be precisely planned and well-briefed before execution so that each subordinate leader knows exactly what is expected of him, knows the commander's intent, and knows he can execute his mission despite the loss of radio communications. Contingencies or alternatives must be built into each plan to allow for continuation of the mission in a fluid environment. Events must be planned to occur based on time (time driven) or the execution of a previous event (event driven) so that actions will occur at the specified time or in the specified sequence despite degraded communications. 8

These elements cannot be successful without support from other types of units. Air assault units are thought to typically consist only of infantry and helicopter (lift) assets. They also need: attack helicopters, recon assets, intelligence support, artillery/ fire support, engineers, air defense, electronic warfare, and combat service support units.

There are no existing units below division level that are capable of unilaterally conducting air assault operations. Pure units do not have adequate organic assets to ensure successful air assault mission accomplishment. 9

## FIRE SUPPORT

Air assault troops are very lightly armed and equipped when they go into battle. Fire Support is just one of the support assets that plays a critical role in air assault operations. "Fire support is the collective and coordinated use of indirect-fire weapons, armed aircraft, and other lethal and nonlethal means in support of a battle plan." <sup>10</sup> To be successful in combat, fire support must be fully incorporated into the planning and execution of the complete mission.

There are a multitude of assets available to the force commander under the broad term of fire support.

Fire support includes mortars, field artillery, naval gunfire, air defense artillery in the secondary mission, and air-delivered weapons. Nonlethal means are EW capabilities of military intelligence organizations, illumination, and smoke. <sup>11</sup>

These assets, however, only support the commander and his intent. "The force commander employs these means to support his scheme of maneuver, to mass firepower, and to delay, disrupt, or destroy enemy forces in depth." <sup>12</sup> In reality, "correctly employed fire support enhances your [the force commander's] ability to fight effectively." <sup>13</sup>



Fire support is a critical part of the force commander's complete plan. It must be totally integrated into the planning process at every level.

The force commander must retain direct control over enough firepower to influence the battle by attacking high-payoff targets, the loss of which prevents the enemy from interfering with our operations or effectively developing his own. 14

The commander must be intimately involved with his fire support if he wants it to be successful and fully supportive of his intent for the operation.

Fire support is a combat multiplier. "Fire support destroys, neutralizes, and suppresses enemy weapons, enemy formations or facilities, and fires from the enemy rear area."

15 Fire support cannot, however, do the job alone!

"Infantry, armor, aviation and artillery must be synchronized and orchestrated by the force commander to realize the full potential of each arm." 16

Combining all the assets available to the force commander into a smoothly operating system, is very difficult. Synchronization is the key when discussing the integration of these assets. To be successful, all the pieces must work as one.

Using all these means in combination creates a synergistic effect - the whole system is far more lethal than its parts. However, the proper combination requires as much skill in orchestration from a fire support coordinator

as does the exercise of combined arms from a maneuver commander. 17

Without synchronization, the commander's plan may be doomed to failure before it begins. Unsynchronized combat power will not be concentrated at the right place and time on the battlefield and may cause the loss of valuable and scarce assets.

To assist the force commander with the synchronization of his fire support assets, there is a fire support coordinator (FSCoord) at every level from company to echelons above corps (EAC). The FSCoord must help accomplish this difficult task for the commander. "Fire support planning and coordination is the operational linchpin of the fire support system." 18 Specifically,

(f)ire support planning is the continuing process of analyzing, allocating, and scheduling fire support. It determines how fire support will be used, what types of targets will be attacked, when they will be attacked, and with what means. The goal is to effectively integrate fire support into battle plans to optimize combat power. 19

The FSCoord and the Fire Support Section (FSE) do the actual planning and scheduling. Their work ensures the synchronization of fire support into the commander's plan.

Their work cannot be done, however, without the complete cooperation of the commander and the entire staff. Fire support planning cannot be done separately, or without

being integrated into the planning at every level. To do their job properly, the FSCoord and FSE must be involved in every step of the command estimate process to ensure fire support is incorporated throughout the entire plan and insure it supports the commander's intent.

### FIRE SUPPORT FOR AIR ASSAULT OPERATIONS

The formation of an air assault task force (AATF) is directed by the division (or higher) headquarters because that echelon controls the aviation assets. The task force is designed for a specific mission and consists of an infantry battalion, an aviation company and, normally, a field artillery cannon battery. 20

With this formation, fire support and fire support coordination must be thoroughly planned and executed in support of the AATF Commander's plan as discussed previously. There are however, some additional issues that must be discussed that pertain specifically to air assault operations.

It takes more than just one plan to successfully execute an air assault operation. There will actually be five separate sub-plans making up the air assault operations plan/order. "Five plans are developed for the execution of an air assault operation:

- \* Staging plan.

- \* Loading plan.
- \* Air movement plan.
- \* Landing plan.
- \* Ground tactical plan." 21

These five plans are subelements of the AATF Commander's complete plan to accomplish his mission. All five subelements contain a great number of details that will effect the other subelements. The commander must insure that all this planning is "not in isolation from the other phases [or subelements]. Planning that pertains to several different phases may go on simultaneously." 22 If planning does happen simultaneously, all individuals, or groups, involved must coordinate their parts of the plan to ensure their subelement does not invalidate the AATF Commander's overall plan.

The first subelement of the overall plan is the staging plan. "The staging plan contains the schedule of the arrival of troops, equipment, and supplies at their respective pickup zones (PZs)." 23 Other specific items covered in the staging plan include: "information on the PZs, troop movement, and sequencing and priorities." 24

The FSO considerations include-

- \* Planning fires for primary and alternate PZ protection without endangering the arrival and departure of troops and aircraft.

\* Ensuring FOs are included in load plans so they arrive at the LZ early in the operation. 25

The next phase of the plan is the loading plan.

(T)he loading plan is based on the air movement plan. The purpose of the loading plan is to ensure that troops, equipment, and supplies to be moved by helicopter are loaded on the correct aircraft. It is critical to distribute essential items of equipment and weapons among the aircraft. 26

The next phase of the plan is the air movement plan.

(T)he air movement plan is based on the ground tactical plan, the landing plan, and the enemy air defense threat. Its purpose is to schedule and provide instructions for moving troops, equipment, and supplies from PZ to LZ. The plan provides coordinating instructions regarding air routes, checkpoints, speeds, altitudes, formations, actions en route, and recovery of downed aircraft. 27

To support these five plans, the fire support element must do some specific fire support planning. Some special considerations and preparation must be made before a fire support plan can be concluded and presented to the commander.

The fire support considerations include the following:

- \* Plan fires to cover primary and alternate PZs and LZs.

- \* Plan fires along the flight route(s) to aid aircraft flying past areas of known or suspected enemy positions. These fires, called SEAD, should be intense

and of short duration. SEAD fires and smoke protect and obscure friendly movements. Fires must not obscure pilot vision. When planning SEAD, consider all fire support assets:

- o EW and jamming assets.
- o Chaff air dropped by USAF to confuse enemy AD radars.
- o Artillery, CAS, and attack helicopters for suppression by fires. 28

An important part of the fire support issues that must be addressed in the air movement plan are how those fires will be controlled.

Fires to support the air movement plan are executed under procedural control, under positive control, on call, or a combination of the three based on METT-T:

- \* Procedural control - fires are initiated and terminated according to a strict time schedule.
- \* Positive control - fires are executed with phase lines, air control points, and/or other control measures to initiate, shift, and terminate fires. 29

The landing phase is developed concurrently with the ground phase. This phase consists of the time, place, and sequence of the AATF arrival into the LZs. Primary and alternate LZs are selected for each unit. 30

Of the fire support issues that must be addressed in the landing plan, how those fires will be scheduled is the most critical part of the planning.

Often it is desirable to make the initial assault without scheduled fires in order to achieve tactical surprise. However, scheduled fires are planned for each LZ to be fired if needed. Scheduled fires include the following considerations:

- \* Plan fires for known or suspected enemy forces regardless of size.
- \* Plan fires in support of the deception plan.
- \* Plan fires for the primary and alternate LZs. Be prepared to execute fires on LZs not being used to deceive the enemy as to which LZs are to be used. 31

The FSCCOORD and FSE must also consider other fire support issues when constructing the complete air assault plan. Some of these issues must include:

- \* Schedule groups, series or programs of targets.
- \* Plan fires that are short in duration and intensive in volume [providing maximum surprise and shock effects].
- \* Avoid creating obstacles to landing and maneuver.
- \* Plan to lift and shift fires to coincide with arrival times of the aircraft formations.
- \* CAS and/ or attack helicopters may be the only assets capable of ranging targets along flight routes and on LZs. 32

The issues listed above however, are not all inclusive. There are still other issues that must be considered by the FSCCOORD and FSE before they can complete their planning. Some

of these issues listed below may overlap with the general or usual fire support planning considerations, but they still should consider and include the following:

Acquire Targets.

- \* Air assault operations generally require target acquisition assets organic to higher echelons to provide deep targeting information.

- \* Aerial fire support observers provide excellent targeting information.

- \* The air assault force is most vulnerable to enemy indirect fires immediately after landing. Plan for the WLR [weapons-locating radar] coverage to assist in the counterfire effort. <sup>33</sup>

The current TO&E of all Corps level units that have light divisions assigned to them have a CTAD (Corps Target Acquisition Detachment) that contains additional radar assets for the light units. <sup>34</sup> The light units only have AN/TPQ-36 Firefinder Radar which can acquire mortar, artillery and rockets out to a range of 15 kilometers. <sup>35</sup> The CTAD will provide two additional AN/TPQ-37 Firefinder Radars with "a minimum system range of 3 kilometers and a maximum range of 30 kilometers for artillery (50 kilometers for rockets)." <sup>36</sup> It also provides an AN/TPQ-25A moving-target-locating radar "with a range of 18 kilometers for vehicles and 12 kilometers for personnel." <sup>37</sup>

Deliver Fires.



- \* Munitions should be carefully selected to provide the best SEAD. Use smoke, WP, VT, and ICM to maximize effect of fires.

- \* A rehearsal of the H-hour sequence should include the FDOs executing the sequence of fires.

- \* Initial fire direction upon insertion may be manual or BUCS.

- \* Initially, MET may not be available.

- \* Use hasty survey techniques for air assaulted artillery after the initial insertion.

- \* Use Army aviation assets to provide position data. 38

The delivery of fires could be critical to the air assaulted unit success. The FSCoord must ensure that the unit, or units, delivering those fires are prepared and ready to execute their portion of the fire support plan when it is called for by the AATF. The FSCoord must also ensure multiple fire support assets are available to answer calls for fire and support the AATF. Prior planning will ensure a successful execution of the fire support plan and may avert a disaster.

#### Survive.

- \* Units are most vulnerable on PZs, LZs, and immediately following insertion. Consideration is given to enemy air, ground, and artillery threat. Positions are selected accordingly.

- \* Plan fires for false insertions in support of the deception plan. 39

This would seem on the surface self-explanatory, but it must be seriously considered during the planning and execution of an air assault operation. Without survival planning for the force, the rest of the planning may be in vain.

#### Communicate.

- \* Use retransmission assets to ensure continuous communication between the FSC controlling the fires during the movement plan and those assets providing those fires.

- \* Plan to use visual signals (flares and colored smoke).

- \* Ensure SOI (Signal Operating Instructions) coordination for air assault forces and supporting forces. 40

Communications may be the most important part of the air assault operation. Without proper communication between the various elements, the mission will not succeed.

Communications is particularly critical to the fire supporters because without the proper commo support they cannot execute the fire support plan or call for fire. To say that communications is critical to the success of fire support, as well as the entire operation, is a gross understatement.

#### Move/ Maneuver.

- \* Appropriate load planning is critical.  
(Units may not be able to deploy as a whole.)

- \* Reconnaissance will be by map or air.

- \* Key leaders must follow progress on maps while in route.

\* Displacement can be by air or ground. 41

Move and maneuver are part of the entire operation in air assaults. You must plan to move the force, its support and all the elements involved in the operation. The units involved must move and maneuver to survive as well. If they move to far or to the wrong place, their commo will not work. These two "parts" must be carefully considered before any air assault operation.

Maintain/ Resupply.

\* Anticipate limited ammo with the assault force artillery.

\* Subsequent resupply of all CSS but primarily class V must be planned, prioritized and synchronized with the maneuver plan. 42

No unit can complete its mission without proper maintenance and logistical support. An air assault mission requires even more attentive planning since the elements may be a great distance from the support base or even behind enemy lines. Helicopter assets also require a great deal of maintenance. A failure to properly plan for maintenance and logistics could doom the mission to failure or kill many innocent soldiers needlessly.

SUMMARY

This chapter has addressed the three major issues dealing with thesis question of this paper. The first issue involved an in-depth study of air assault operations. It would be impossible to address and review fire support for air assault operations if there was not a clear understanding of the basic air assault operation.

The second issue this chapter dealt with was the basics of fire support and their role in combat operations. Without at least an overall discussion of fire support in general, there can be no common ground for establishing the fire support requirements for air assault operations.

The final, and most important, issue in this chapter discussed the actual doctrine, tactics, techniques, and procedures for fire support for air assault operations. The doctrine to support fire support in air assault operations exists but it is difficult, at best, to locate in any detail. The tactics, techniques, and procedures manual for the cannon battalion was published in February of 1990 in draft form but has not made it out to "the field" as yet. This manual will help answer some of the questions, but also does not contain some of the information in other manuals, such as those published by the Aviation School.

The major problem still remains. There is no definitive manual, or document, on fire support for air assault operations. The information available on this complicated subject is located in no less than six different

references and these are not just Field Artillery publications. It is no wonder there is no standard for fire support for air assault operations.

## ENDNOTES CHAPTER FOUR

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2 U.S. Department of the Army, FM 1-100, Army Aviation in Combat Operations. 28 February 1989, 1-1.

3 FM 90-4, 1-4.

4 Ibid., 1-1.

5 "Operation Desert Storm: The 100-Hour War," Army Times, 11 March 1991, 40.

6 FM 90-4, 1-2.

7 Ibid., 2-10.

8 Ibid.

9 Ibid., 1-2.

10 U.S. Department of the Army, FM 6-20, Fire Support in the AirLand Battle. 17 May 1988, 1-2.

11 Ibid., 1-2.

12 Ibid.

13 U.S. Department of the Army, TC 6-71, Fire Support Handbook for the Maneuver Commander. 10 November 1988, 5.

14 FM 6-20, 3-2.

15 Ibid., 1-2.

16 TC 6-71, 6.

17 Ibid.

18 FM 6-20, 1-2.

19 U.S. Department of the Army, FM 6-20-50, Fire Support for Brigade Operations (Light). 17 May 1988, 2-1.

20 U.S. Department of the Army, FM 6-20-1, The Field Artillery Cannon Battalion Final Draft (Unedited).  
23 February 1990, A-27.

21 FM 6-20-50, B-10.

22 Ibid.

23 Ibid.

24 Ibid.

25 Ibid.

26 Ibid.

27 Ibid., B-11.

28 Ibid.

29 Ibid.

30 Ibid.

31 Ibid.

32 FM 6-20-1, A-28.

33 Ibid., A-29.

34 Ibid., 5-5.

35 FM 6-121, 5-3.

36 Ibid., 3-3.

37 Ibid., 5-5.

38 FM 6-20-1, A-29.

39 Ibid.

40 Ibid., A-30.

41 Ibid.

42 Ibid.

## CHAPTER FIVE

### CONCLUSIONS AND RECOMMENDATIONS

#### INTRODUCTION

This study has examined the question, "is there a valid, standard procedure for fire planning to support air assault operations?" In trying to answer that question, this author examined four major issues that have an impact on this issue. The four issues are:

- \* What is the current doctrine for fire planning in support of air assault operations?

- \* What current fire planning methods are being used in the field to support air assault operations?

- \* Are the current fire planning methods are being used in the field standardized?



\* Should there be a standard procedure adopted for fire planning in support of air assault operations?

The result of this study is the determination of essentially five conclusions:

- \* Fire support doctrine to support air assault operations does exist, but documentation to support this doctrine is difficult to find and use because it is not found in one place.
- \* There is a great difference in opinion regarding the best way to control the fires of an air assault operation, ie. procedural control vs. positive control.
- \* There are great discrepancies in how different units conduct fire support for air assault operations, so it is very difficult for the artillery to establish tactics, techniques, and procedures to support air assault operations.
- \* There is no standard procedure currently being used, or espoused, by the U.S. Army for fire support in air assault operations.
- \* The U.S. Army needs to adopt standard procedures for fire support for air assault operations.

## CONCLUSIONS AND RECOMMENDATIONS

The first conclusion reached by this author, concerns fire support doctrine for air assault operations. Fire support doctrine to support air assault operations does exist, but documentation to support this doctrine is difficult to find. This was the most frustrating part of this author's work on this thesis. There is plenty of information available on fire support for air assault operations, but not all the information is written down in one place.

The information needed to conduct the planning and execution of an air assault operation is available. However, finding all the information in the numerous manuals makes it almost impossible to insure anyone, anywhere, has all the information they need to properly plan and execute an air assault operation. With this lack of information, how can our soldiers be trained and prepared to go into combat?

The Field Artillery School Manuals, the FM 6-XX series of manuals, have most of the required information. The problem again arises that not all the information is in one manual. FM 6-20-50, Fire Support for Brigade Operations (Light), has much of this information but there are some important missing pieces. The FSO must have some additional

information about infantry and helicopter operations to properly deal with the five plans involved in an air assault operation. FM 6-20-50 mentions these plans and has an excellent section on what to do, but does not discuss the details an FSO will need to successfully plan one of these complex operations. They assume a great deal of prior knowledge and experience that most artillerymen do not have.

FM 90-4, Air Assault Operations was an excellent reference for this thesis. Almost every chapter and section had some information about fire support as it pertained to that particular area of interest. Particularly noteworthy was the section devoted to fire support in Chapter Five, Section II "Combat Support" and Appendix A, "Conduct of an Air Assault Operation." With some work, this manual could cover the material in enough detail that it would almost be a stand alone document on air assault operations.

FM 6-20-1, Tactics, Techniques and Procedures for The Field Artillery Cannon Battalion was also an excellent reference. The three plus pages that addressed this subject were much better than most of the other references. The easy to read and digest lists and explanations would make a manual like this easy to read and use!

To remedy this situation, the Field Artillery School, the Infantry School, and the Aviation School must get together and discuss these issues in detail and produce a manual like FM 90-4, Air Assault Operations. This excellent

manual could be even better if it was expanded to address some of the issues discussed above. The military is not some simple business that can be taught in the classroom. Soldiers must have manuals and hands on equipment that will help the military learn and understand their complex and difficult job.

The second conclusion involves the best method to control the fires of an air assault operation. There is a great difference in opinion in the best way to control the fires of an air assault operation. The two methods currently being used are procedural control and positive control.

Many of the manuals and sources used to research this thesis made some mention of these two terms. Some gave a sentence or two to describe this difficult and possibility life threatening control measure. There were even some references that espoused using a combination of the two.

The basic problem of "how" remains unanswered. What is "the" best way, to conduct the fires for an air assault operation? Nowhere could this author find a detailed explanation or example of how to execute either one of these methods of control. (FM 6-20-50 only has an example of time computations for flight times and an example of "FSO Action During Landing.") Both are good starting points for examples, but should go into more detail on each of the five plans and how they are all linked together into one plan. A

running scenario to provide an example of an air assault operation from start-to-finish, would be the best way to deal with this problem for everyone concerned in air assault operations.

To fix this situation, perhaps a model of an air assault operation could be included in the manuals that includes a running scenario supplying an example of an air assault operation from start-to-finish. This might be the best way to deal with this problem and provide an excellent example of the best way to control those fires. Everyone concerned, and involved, in air assault operations would find a scenario like this very helpful because of the knowledge gained about their own jobs, including the knowledge and understanding they would gain about the jobs of others soldiers with whom they would be working. This scenario would answer many questions and be very helpful to everyone involved from the AATF down to the last private loading into a helicopter to make that assault.

The third conclusion reached in this thesis, involves the great discrepancies found in the conduct of fire support for air assault operations. It is very difficult for the artillery to establish tactics, techniques, and procedures to support air assault operations when there is no standard for conducting these operations.

A joint effort by all the service schools to solve this problem, as discussed above, is critical. There are

many unanswered questions in these references that will only be answered by a group effort to iron them out.

An example of these problems and a need for this type of cooperation would be the various air assault SOPs of the numerous "light" units that practice these air assaults regularly. Each one is very different and proposes a different solution on how to accomplish air assault operations. This only confuses the issues even more and allows for very little cooperation based on similar procedures and SOPs in each unit.

Fixing this problem may be very difficult. Getting all the various schools to agree on one way, or one "best" way, to conduct a particular operation can be very difficult. However, an Army standard is desperately needed to ensure there is only one "best" way to conduct air assault operations.

The fourth conclusion of this thesis, concerns the lack of a standard procedure currently being used, or espoused, by the U.S. Army for fire support in air assault operations. This problem is compounded since no army standard for conducting air assault operations exists either.

This was the biggest single problem this author found in the research of this thesis. The author found references to a "standard" in many publications but was unable to locate such a standard. (The Field Artillery School

obviously agrees or they would not have asked that this thesis be completed.)

Since there is no standard for air assault operations, there is no standard for fire support for air assault operations. This could be a very dangerous situation. With no standard available on which the service schools can base their training, or for units to base their SOPs, no one really knows what special procedures must take place to provide fire support for air assault operations.

A concentrated effort to solve this problem must start immediately. When the lessons learned by the 101st Airborne (Air Assault) Division during Operation Desert Storm are supplied to the various schools, they should begin work on a standard for air assault operations. Until this critical first step has been taken, the combat support and combat service support schools will not be able to develop their support for air assault operations.

The fifth and final conclusion of this thesis, involves the question of standard procedures for air assault operations. There should be a standard procedure adopted, as soon as possible, for conducting fire planning in support of air assault operations.

Standardization has always been one of the many strengths of fire support. To ignore this important part of fire planning for air assault operations, must be rectified immediately. The Field Artillery School must move quickly

to develop a standardization of fire planning for air assault operations.

Units currently are basing their SOPs on historical practices, lessons learned, or SOPs borrowed from other units. This is why there are such diverse examples of SOPs in use in the field.

Once a standard has been developed, the Field Artillery School would be able to study this standard, and develop a standard for fire support for air assault operations. This will finally provide a standard that can be studied and adopted by fire supporters in units that support air assault operations. Then no matter who is doing the air assault operation, fire supporters will be able to support the operation with all the means available, and everyone involved will know exactly what to expect from each other during the operation. This is critical to American future successes and standardization of all operations. The Army must have a standard.

The Infantry School, in conjunction with the Aviation School, must begin work immediately to develop a standard for air assault operations. Only then can the other schools develop their own support plans for air assault operations. Only then will there be a true standard for all phases of air assault operations.



## IMPLICATIONS OF THE STUDY

With the success enjoyed by the 101st Airborne (Air Assault) Division, their combat experience will be important in the planning, execution, and future developments of air assault operations and fire support for air assault operations. The Army must seize this opportunity and take advantage of it quickly to properly capitalize on this combat experience.

The Army will be undergoing many changes in the next few years that will call for a new "leaner and meaner" force to be highly trained and highly motivated. This will also require the leaders of these units to be experts in their fields or branches. Unless the U.S. Army has standards, examples, and manuals that not only provide the background on issues but "how to" sections on doing things, the Army will find itself without properly trained soldiers and leaders. This author can only hope that the Army will move quickly and take advantage of this golden and timely opportunity presented by Operation Desert Storm and the 101st Airborne (Air Assault) Division.

## RECOMMENDATIONS FOR FURTHER STUDY

After an in-depth study of the doctrine, tactics, techniques, and procedures of fire support for air assault operations, many peripheral issues surfaced that merit further study and examination. Some of these issues for further study are recommended below.

The best format to present the complete doctrine for fire support for air assault operations.

Fire support doctrine for the different types of army aviation units.

The best way to conduct deep fires for air assault operations.

Fire support for air force assets working with, and for, army units in the CAS role or while escorting and supporting army maneuver and army aviation assets in air assault operations.

Artillery may not be the best asset to use in an air assault operation.

What is the best way to control the fires of an air assault operation, ie. procedural control vs. positive control?

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